RESPONSIVENESS SUMMARY

Stream Use Designation Revisions

Prepared by the
Iowa Department of Natural Resources
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Introduction

This is a summary of the comments received in response to proposed revisions to the Environmental Protection Commission's (EPC's) water quality standards (WQS). The proposed changes were published in the Notice of Intended Action **ARC 7624B** on March 11, 2009. This document provides a discussion of the issues raised by the comments as well as recommendations for final EPC action on the proposed changes.

Summary of Rule/Rule Changes:

1. Revise and list approximately 33 river and stream segments as Class A2 Secondary Contact Recreational Use designated waters in the rule-referenced document "Surface Water Classification."

2. Revise and list approximately 83 river and stream segments as Class A2 Secondary Contact Recreational Use and Class B(WW-2) Warm Water-Type 2 designated waters in the rule-referenced document "Surface Water Classification."

3. Revise and list four stream segments as Class A2 Secondary Contact Recreational Use and Class B(WW-3) Warm Water-Type 3 designated waters in the rule-referenced document "Surface Water Classification."

4. Revise and list six river and stream segments as Class A3 Children's Recreational Use and Class B(WW-2) Warm Water-Type 2 designated waters in the rule-referenced document "Surface Water Classification."

5. Revise and list 11 river and stream segments as Class A3 Children's Recreational Use designated waters in the rule-referenced document "Surface Water Classification."

6. Revise and list one stream segment as Class HH Human Health designated water in the rule-referenced document "Surface Water Classification."

Recent rule making and 2006 legislative action have brought the Department's water quality rules closer to compliance with federal Clean Water Act requirements and U.S. Environmental Protection Agency (EPA) regulations, establishing new levels of protection for water quality. As an outcome of these efforts, all 26,000 miles of Iowa's perennial (flowing year-round) streams are initially protected at the highest levels for recreation and warm water aquatic life uses. These actions provide initial protection for many miles of perennial streams that were previously not designated for aquatic life and/or recreational uses.

Under the rules adopted in 2006, it is presumed that all perennial streams and rivers are attaining the highest level of recreation and aquatic life uses and should be protected for activities such as fishing and swimming. This concept of assigning all perennial streams the highest use designation, unless assessments show that the stream does not deserve that level of protection, is referred to as the "rebuttable presumption."

Included in the federal regulations are the provisions that allow for scientific analysis of these "presumed" recreational and aquatic life uses. An integral part of implementing the rules adopted in 2006 is verifying that a stream is capable of supporting the presumed uses.

The concept of Use Assessment and Use Attainability Analysis (UA/UAA) is being applied by the Department as a step-by-step process to gather site-specific field data on stream features and uses. The Department then assesses available information to determine if the "presumed" recreational and aquatic life uses are appropriate.

The Department elected to perform a UA/UAA on any newly designated stream that receives a continuous discharge from a facility with a National Pollutant Discharge Elimination System (NPDES) permit. Prior to issuing an NPDES permit for an affected facility, the Department will complete a UA/UAA for the receiving stream or stream network.

Six public hearings were held: Des Moines on April 7, 2009; Atlantic and Cherokee on April 9, 2009; Independence and Iowa City on April 14, 2009; and Clear Lake on April 16, 2009. Notice of the hearings was sent to interest groups and statewide news network organizations. Written comments were originally received through April 30, 2009. The department extended the time in which we accepted comments through May 20, 2009. The hearings were lightly attended and no oral public comments were recorded.

Approximately 31 persons or groups provided written comments on the proposed WQS revisions (The commentators' names are listed in the Appendix). The responsiveness summary attempts to address all of the comments received. The comments received are addressed below in terms of the issues involved. The department did not list every comment received, but rather merged common comments into major issue areas. The department did attempt to address every technical and miscellaneous question or comment received.

Public Comment Breakdown:

Total amount of commenter's/responses = **252**

Number of stream specific commenter's = **16**

Number of form letters = **206**

*It should be noted that comments were received that did not apply to stream segments proposed in this rule making effort.

Number of stream designations that are proposed to change as a result of the public comments = **2**

The department apologizes if some individuals or their comments are not specifically listed in this responsiveness summary. However, it is felt that the content of all the comments has been included in this summary.

The questions and comments were sorted into common topics. The department's response is written below each issue identified.

Recommendations

Based on comments from the public, DNR recommends 2 adjustments to the proposed stream use designation revisions for Ballard Creek (Story Co.) and the Little Maquoketa River (Dubuque Co). The adjustments apply primarily to recreational uses, specifically changes from the proposed Class A2 secondary contact recreational use to either Class A1 primary contact or Class A3 children's play recreational uses.

See Appendix 2 for revised recommendation maps.

Issue: Attainability

Public Comments
- The DNR intends to allow a further increase in toxicity
- We continue to disagree with the characterization of the stream designation process by some that this is a "downgrade" or "cutting back" of stream protections.
- All streams deserve higher standards
- A "remote potential" of secondary uses such as hunting or trapping should not be considered an A2 recreational use. A creek described with only shallow pools and no interconnecting runs should not be considered an A2 recreational use.
- The DNR is proposing downgrading 119 stream segments with less protection
- It doesn't sound very much like the DNR to reduce water quality standards? Does the Sierra Club have its information right?

DNR Response: Water Quality Standards are the goals for Iowa's water bodies. We are working to determine the highest attainable goals for these waters given our current designated use structure.

Recent rule making and 2006 legislative action have brought the Department's water quality rules closer to compliance with federal Clean Water Act requirements and U.S. Environmental Protection Agency (EPA) regulations, establishing new levels of protection for water quality. As an outcome of these efforts, all 26,000 miles of Iowa's perennial (flowing year-round) streams are initially protected at the highest levels for recreation and warm water aquatic life uses. These actions provide initial protection for many miles of perennial streams that were previously not designated for aquatic life and/or recreational uses.

Under the rules adopted in 2006, it is presumed that all perennial streams and rivers are attaining the highest level of recreation and aquatic life uses and should be protected for activities such as fishing and swimming. This concept of assigning all perennial streams the highest use designation, unless assessments show that the stream does not deserve that level of protection, is referred to as the "rebuttable presumption."

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The concept of Use Assessment and Use Attainability Analysis (UA/UAA) is being applied by the Department as a step-by-step process to gather site-specific field data on stream features and uses. The Department then assesses available information to determine if the "presumed" recreational and aquatic life uses are appropriate.

The Department elected to perform a UA/UAA on any newly designated stream that receives a continuous discharge from a facility with a National Pollutant Discharge Elimination System (NPDES) permit. Prior to issuing an NPDES permit for an affected

facility, the Department will complete a UA/UAA for the receiving stream or stream network.

The secondary contact recreational use (Class A2) provides the department with a means of providing recreational use protection to waters where Primary Contact rec. use is not attainable. It is important to note that the department is working to answer the question "is Primary Contact Recreation (i.e. swimming) possible here?" The key component is in these assessments is whether or not there is enough water present in rivers or streams in which recreational uses may result in prolonged and direct contact with the water, involving considerable risk of ingesting water in quantities sufficient to pose a health hazard.

The department used depth as a guideline to determine whether or not a water body could support Class A1 uses (i.e., 1 meter maximum or 0.5 meters maintained over 50% of the reach) to better address the issues regarding recreational activities. The concept here is that many Class A1 type activities require the presence of a significant amount of water to support those activities. The implementation of these guidelines do a good job of addressing this issue as waters that possess enough flow or water present to support Class A1 typically are the waters deep enough for canoeing or swimming (e.g., the 1,300 miles verified as Class A1 in the original assessments). The EPA has approved this approach in other states.

This approach is rather conservative in that the department is able to protect rivers and streams where no known recreational use has ever taken place. The idea is that the activities are "possible" whether it is a Class A1 or Class A2 stream regardless of water quality. This is a reason why secondary contact is used in Iowa and many other states such as Kansas, Missouri, West Virginia, Kentucky, New Hampshire, Louisiana, Texas, New York, Idaho, and Ohio, to name a few. It provides protection to rivers and streams in which recreational uses may result in contact with the water that is either incidental or accidental where the probability of ingesting appreciable quantities of water is minimal. It establishes a reasonable and practical goal use for smaller, shallow water systems where probability of ingestion is minimal due to the lack of flow.

It should be noted that as a result of these stream designation revisions, several municipal and industrial regulated facilities (point sources i.e. municipal wastewater treatment plants, industrial process plants like meat packers or metal finishers) may face significant upgrades to the current wastewater treatment plants. The department has estimated that once these protections are in place, the associated fiscal impact could be up to $750 to $960 million state wide for affected communities and industries.

To comply with these new protections, wastewater treatment facilities are potentially faced with upgrading the current treatment plants as a result of this proposed rule, which could include disinfection and/or ammonia removal systems. In reality, these stream use designation revisions actually upgrade stream protections by establishing implementable designated uses for Iowa's rivers and streams that have never received this level of protection before. As a result, water quality should significantly improve where these

treatment plants are located. To say this is a downgrade in implementable protections is simply not true.

Issue: Access

Public Comments
- When determining whether a use is attainable, the department is required to consider the degree to which the public has access to the stream segment under § 455B.176A(4)(c).
- A stream that is difficult to access because of trees, vegetative growth or terrain located in a sparsely populated area should be a general use stream in accordance with Iowa law.

DNR Response: Accessibility is not a factor by itself that can be used to determine attainability according to federal guidance. However, the department addresses accessibility in the UAA write-ups. The designation of a stream does not change the nature of access to that stream.

Issue: What types of activities are considered for Class A1 and Class A2 recreational uses?

Public Comments
-Canoeing, kayaking, tubing and wading along streams and rivers is a form of recreation that requires primary contact with water as defined by the Code of Iowa and Iowa Administrative Code.
-Is canoeing or kayaking consistent with Class A1 or Class A2?
-We strongly believe canoeing, kayaking, and tubing are Class A1 uses.

DNR Response*:* Iowa Administrative Code (IAC), Part 567, Chapters 60, and 61 note applicable definitions and provisions regarding Iowa's Water Quality Standards (WQS). The WQS establish specific use designations for waterbodies that support or are capable of supporting primary and secondary contact recreation and children's recreational activities, referred to as the group of Class A waters.

Waters designated as Primary contact recreational use (Class A1) are;

> 'Waters in which recreational or other uses may result in prolonged and direct contact with the water, involving considerable risk of ingesting water in quantities sufficient to pose a health hazard. Such activities would include, but not limited to, swimming, diving, water skiing, and water contact recreational canoeing.' [567-61.3(1)b(1)]

Waters designated as Secondary contact recreational use (Class A2) are;

> 'Waters in which recreational or other uses may result in contact with the water that is either incidental or accidental. During the recreational use, the probability of ingesting appreciable quantities of water is minimal. Class A2 uses include fishing, commercial and recreational boating, any limited contact incidental to shoreline activities and

activities in which users do not swim or float in the waterbody while on a boating activity.' [567-61.3(1)b(2)]

In addition, 567-60.2 further defines Primary contact as

'…any recreational or other water use in which there is direct human contact with the water involving considerable risk of ingestion of water or contact with sensitive body organs such as the eyes, ears, and nose, in quantities sufficient to pose a significant health hazard.'

Secondary contact is defined in Department rules (567-60.2) as

'…any recreational or other water use in which contact with the water is either incidental or accidental and in which the probability of ingesting appreciable quantities of water is minimal, such as fishing, commercial and recreational boating and any limited contact incidental to shoreline activities. This would include users who do not swim or float in the water body while on a boating activity.'

Water contact recreational canoeing is defined in Department rules (567-60.2) as

"means the type of activities associated with canoeing outings in which primary contact with the water does occur. This would include users who swim or float in the water body while on a canoeing outing."

The department has attempted to be consistent with the historical intent of these rules at the time of their adoption by the Environmental Protection Commission (EPC). In general, waters where swimming (i.e., full body immersion) is reasonably possible are considered to be able to support activities "that may result in prolonged and direct contact with the water, involving considerable risk of ingesting water in quantities sufficient to pose a health hazard". The definition further provides examples of what activities this can encompass such as "swimming, diving, water skiing, and water contact recreational canoeing".

The EPC decided that a distinction should be made between the activities of canoeing versus water contact recreational canoeing with the understanding that some people who canoe do not want to get wet while others intend to get wet.

Looking at this distinction in regard to use attainability can pose implementation issues. The department's understanding upon assessing these waters is that Class A2 and its associated criteria ensures that water will be of a sanitary quality to protect the public if contact with the water is incidental and infrequent. Canoeing was considered an activity consistent with Class A2 and Class A2 is protective of that type of activity. In addition, EPA's draft "Implementation Guidance for Ambient Water Quality Criteria for Bacteria" from May of 2002 defines secondary contact activities as

"those activities where most participants would have very little contact with the water and where ingestion of water is unlikely. Secondary contact activities may include wading, canoeing, motor boating, fishing, etc."

The department used depth guidelines to help in determining whether or not a water body could support Class A1 uses (i.e., 1 meter maximum or 0.5 meters maintained over 50% of the reach) to better address the issues regarding recreational activities. The concept here is that many Class A1 type activities require the presence of a significant amount water to support those activities. The implementation of these guidelines do a good job of addressing this issue as waters that possess enough flow or water present to support Class A1 typically are the waters deep enough for canoeing (e.g. the 1,300 stream/river miles verified as Class A1 in the original assessments). The EPA has approved this approach in other states.

The majority of stream specific comments received were tied to a small number of DNR's original recommendations that did not meet our depth guidelines; this is one of the main causes of the controversy regarding use attainability analysis rulemaking efforts. If, upon evaluation of the public comments and re-evaluation of the data collected, we discover activities that are consistent with water contact recreational canoeing or common kids play despite the marginal flow conditions, then adjustments will be made to the original recommendations.

Issue: Class A2 criteria is not protective of public health

Public comments
-Children are not protected by Class A2
-The DNR is here to protect the public – or do I misunderstand the concept?
-All streams should be protective of public health

DNR Response: These comments relate to the differing *E. coli* bacterial criteria for A1 (primary contact recreational use) and A3 (children's recreational use) streams versus A2 (secondary contact streams). These criteria are provided below.

Table 1

Use	Geometric Mean (cfu/100mL)	Sample Maximum (cfu/100mL)
Class A1	126	235
Class A2	630	2880
Class A3	126	235

It is noted that the geometric mean criterion for Class A2 waters is five times the Class A1 and Class A3 criteria and the sample maximum criterion is 12.25 times the Class A1 and Class A3 criteria.

These water quality criteria were adopted by the Environmental Protection Commission on May 19, 2003 and were approved by the EPA on June 16, 2004. There was considerable public input and discussion when the Commission adopted these criteria and this rule making action is not proposing to change these criteria. In adopting these

criteria, the Commission recognized that the pathogenic risk associated with aquatic recreation is dependent not only on the level of pathogens (which include viruses and parasites in addition to some strains of bacteria) present but also on the mode of exposure. Class A1 waters are those waters for which there is "*prolonged and direct contact with the water, involving considerable risk of ingesting water in quantities sufficient to pose a health hazard.* [567-61.3(1)b(1)]. Typical activities associated with a Class A1 use include swimming, diving, water skiing, and water contact recreational canoeing. Class A2 waters, on the other hand, are those waters where contact is either incidental or accidental and *"the probability of ingesting appreciable quantities of water is minimal."* [567-61.3(1)b(2)]. In approving these criteria, the Commission and the EPA have determined the criteria will, in fact, be protective of these uses.

The heart of the matter being considered in this rule making effort is whether a waterbody can be used for uses typical of the Class A1 use designation or if factors such as flow characteristics limit its uses to those associated with the A2 classification. Or, in some cases, whether any of the Class A1, A2 or A3 uses are physically possible. Therefore, the comments provided regarding the appropriateness of the Class A2 bacteria criteria versus the Class A1 and A3 criteria are not directly relevant to the proposed action as the Commission has already decided this matter. However, given the considerable public interest in this matter, it is appropriate to recap the rationale behind these bacteria criteria.

The transmission of disease via water contaminated with feces from warm-blooded animals and humans is well documented. Feces contain a variety of microbes, many of which are either beneficial or cause no particular problem. Some estimates are that a human may have upwards of a trillion bacteria within their body at any given time, with most residing within the intestinal tract. Some of these fecal microbes, however, may be pathogenic and feces from infected persons and animals will contain some amount of the pathogenic microbes. These include some strains of bacteria, viruses and parasites such as *Cryptosporidium parvem* and *Giardia lamblia*. Consumption of water contaminated with pathogenic microbes is the most direct route of infection although infection through contact with mucous membranes and open wounds is also possible. Because these pathogenic microbes differ considerably in their characteristics and humans have differing levels of immunity and resistance, it is very difficult to determine a "safe" level for drinking water given that a person might consume over several liters per day. This is why public drinking water standards are intended to provide a zero risk by insuring drinking water contains no pathogenic microbes.

People swimming in marine and fresh waters can also be exposed to fecal pathogens either by incidentally swallowing the water or by dermal contact. All natural waterbodies will contain some amount of fecal contamination, especially after runoff events. Attaining a zero risk of infection is not possible in these natural waterbodies; the question is what level of contamination presents an unacceptable level of risk to people who swim or recreate in those waters?

Due to the varied nature of the pathogenic microbes associated with fecal contamination, directly analyzing water for pathogenic microbes and establishing dose-response relationship with each pathogen is not possible. Instead, researchers have typically used an indicator organism, such as fecal coliform bacteria, in an attempt to characterize the level of fecal contamination in water and to correlate the level of indicator organisms with the incidence of disease associated with swimming or recreating in contaminated water.

The ideal indicator organism would be:

- non-pathogenic (minimizing risk to analysts);
- easily detected by simple laboratory tests in a very short time consistent with accurate results;
- indicative of the relative degree of fecal contamination;
- be pathogenically representative of all the potential pathogens that might be present; and
- have survival times equal to or that exceed other pathogenic microbes.

Scientists have not found the ideal indicator organism. A number of studies as documented in the EPA's guidance documents as well as other sources such as the European Union Directive have looked at a variety of indicator organisms such as total coliforms, fecal coliforms, *E. coli*, streptococci, and enterococci, as these are all groups of relatively non-pathogenic bacteria that are present in the gut of humans and warm blooded animals. At one time, the EPA recommended the use of fecal coliforms as a measure of pathogenic risk but now recommends *E. coli* or enterococci. However, these recommendations are now under review once again because of significant issues that have been raised regarding the efficacy of these indicator organisms as a measure of pathogenic risk.

Numerous epidemiological studies have been conducted over the years that attempted to correlate the level of indicator organisms present in the water with the incidence of disease, primarily enteric diseases such as diarrhea. These studies have been reviewed in such documents as the EPA's 1986 Water Quality Criteria for Bacteria document and a later, as yet not finalized, implementation guidance document. Most of these studies were conducted at swimming beaches in marine waters with only a few being conducted at fresh water beaches such as the Great Lakes. In general, the studies found that the incidence of sickness increased with increasing levels of pollution, but establishing clear relationships as to what constitutes an acceptable level of fecal pollution and how to accurately measure the pathogenic risk has remained elusive.

The EPA has acknowledged that while the epidemiological data for swimming in freshwater lakes is very limited, there is essentially no such reliable information for freshwater streams, especially for secondary contact recreation like fishing or wading. The European Union has determined that one of the largest sources of human pathogens at a swimming beach originate from other bathers (fecal shedding) and, therefore, the epidemiological studies for those waters are not directly applicable to waters where

human contact is limited and incidental. For that and other reasons the EU is only recommending a criterion of 1000 cfu's for actual bathing waters (i.e., public beaches).

The EPA recognized the difficulty in establishing secondary contact criteria in their 1986 criteria document:

> *"Because of the different exposure scenarios and the different exposure routes that are likely to occur under the two different types of uses, EPA is unable to derive a national criterion for secondary contact recreation based upon existing data."*

The Commission-adopted bacteria criteria to closely follow the recommendations in the EPA's 1986 criteria document, which has not been updated or modified to date despite considerable discussion and controversy. The bacteria recommendations for secondary contact recreation in that 1986 document were based purely on "professional judgment" with relatively little rationale being provided to support that judgment nor was there epidemiological evidence to support those criteria.

It might also be useful to put these criteria in perspective. The "raw" sewage entering a domestic sewage treatment plant can have fecal coliform concentrations in the millions of colony-forming units per 100 milliliters of water. Levels in the tens or even hundreds of thousands are sometimes measured in streams where the only potential source of pathogens is wildlife. The adopted criteria for A1, A2 and A3 are extremely low in comparison and may not be reasonably attainable under any circumstances in natural waters like streams and rivers unless all wildlife, pets and livestock are eliminated from the watershed.

In summary:

- The EPA was unable to derive a national criterion for secondary contact recreation given the fact that no epidemiological studies for incidental contact for running water or even lakes have been conducted.

- The Class A2 criterion is different than Class A1 and is due largely to EPA's "professional judgment" which has little factual basis in the way of epidemiological support.

- The 2006 European Union Directive recommends an *E.coli* criterion of 1,000 cfu's for "good" waters that are used for bathing; there are no recommendations for secondary contact type uses.

- In rural settings where the frequency of full body immersion is infrequent and not shared extensively with other bathers the criteria established to protect Class A2 Secondary Contact Recreational Use is quite likely to be very over protective of health. In natural waters, there will always be some level of risk from a variety of pathogenic microbes as well as other factors.

- The EPA is currently reevaluating bacteria criteria due to the scientific defensibility and implementation of existing 1986 criteria. EPA recognizes all previous epidemiological studies have been conducted at lake beaches and that lake environments can and do differ significantly from flowing waters. Therefore, EPA is currently evaluating different criteria/implementation methods for flowing waters.

- There is concern that non-disinfected discharges from wastewater treatment plants will be allowed and encouraged by the proposed rule. That is simply not the case. Non-disinfected wastewater typically contains hundreds of thousands if not millions of bacteria per 100 mL. The Class A2 designation (630 cfu/100 mL) would still force disinfection of proposed wastewater discharges prior to discharge.

Issue: Existing Uses

Public Comments
-The occurrence of an existing use is the proof that the use has been attained and is therefore an existing use and existing uses can never be removed.

DNR Response: The code of federal regulations defines existing uses as "those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards" (CFR 131.3(e)).

At first blush, the question "What is an Existing Use?" seems straightforward and easy to answer. Outside of the regulatory context, one might be inclined to equate the question with "Did a use actually occur?" If yes, then the use is an "existing use." But the regulation does not define existing uses as "those uses that *actually occurred* in a water body on or after November 28, 1975." Instead, the regulation uses the language *"actually attained."* When considered in the context of federal water quality standards regulations, there is a distinct difference between "actually occurred" and "actually attained."

Section 131.2 of the federal water quality standards regulations explains the purpose of water quality standards.

> A water quality standard defines the *water quality goals* of a water body, or portion thereof, by designating the use or uses to be made of the water and by setting criteria necessary to protect the uses. States adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act (the Act). "Serve the purposes of the Act" (as defined in sections 101(a)(2) and 303(c) of the Act) means that water quality standards should, *wherever attainable,*

> provide water quality for the protection and propagation of fish, shellfish and wildlife and for recreation in and on the water and take into consideration their use and value of public water supplies, propagation of fish, shellfish, and wildlife, recreation in an on the water, and agricultural, industrial, and other purposes including navigation.
>
> Such standards serve the dual purposes of *establishing the water quality goals for a specific water body* and serve as the regulatory basis for the establishment of water-quality-based treatment controls and strategies beyond the technology-based levels of treatment requires by sections 301(b) and 306 of the Act. (40 CFR § 131.2 (emphasis added).)

In other words, uses are designated not because the uses actually are occurring in a water body, but because the uses reflect a *water quality goal to be attained* for a particular water body consistent with the purposes of the Clean Water Act. At the time a particular use is designated by a state, that use might not be occurring and the water quality to protect and support that use may not yet be attained. Protective water quality is attained through the "establishment of water-quality-based treatment controls and strategies" designed to meet the water quality standards criteria for specific pollutants.

Federal regulations recognize, however, that even after a state designates a particular use for a water body, attaining the water quality to support that use may not be feasible. Therefore, the regulations allow a state to remove a designated use if the state "can demonstrate that attaining the designated use is not feasible" because of one or more factors outlined in the regulation described at 40 CFR § 131.10 (g). The state makes this demonstration through a use *attainability* analysis (40 CFR § 131.10(j)(2)). However, this option is available only if attaining water quality to protect a use is not feasible. Once the water quality goal to protect a use, whether designated by a state or not, has been attained, the water quality standards regulations ensure that that level of water quality is maintained, first through an "antidegradation policy," s*ee* 40 CFR § 131.12, and second, through the concept of "existing use" (*see* 40 CFR § 131.10 (g) and (h)).

When considered within this context, the meaning of the term "actually attained" in the existing use definition seems clear. "Actually attained" refers to the attainment of the water quality necessary to support a particular use, whether or not that use actually has occurred in the water body. It would be inconsistent with the purposes of the Clean Water Act to allow degradation of water quality once it has been attained on or after November 28, 1975. Conversely, if the water quality necessary to protect a particular use has not been attained on or after November 28, 1975, then that use is not an existing use. This interpretation of the existing use regulation is supported by and consistent with relevant EPA guidance documents, federal law and other EPA materials, as shown below.

EPA Guidance Documents and Relevant Materials on Existing Use

Unfortunately, a clear and comprehensive analysis of the recreational existing use issue is not included in early EPA Guidance Documents on water quality standards review. The reason for this may be that most EPA guidance on conducting a UAA has addressed the aquatic life designated use. If water quality is not sufficient to protect aquatic life, then aquatic life will not be present, and therefore the issue of existing use does not arise. The recreational designated use poses a different situation. People may choose to recreate in a water body even if it has not attained the water quality necessary to support the recreational use.

Nevertheless, even though the term "actually attained" is not defined and the process for determining whether a use has actually been attained has not been explicitly specified, EPA guidance documents and other relevant materials support a water quality-based interpretation.

Likewise, in 1998, EPA issued an Advanced Notice of Proposed Rulemaking seeking comments from interested parties on possible revisions to the Water Quality Standard regulations. *See* Advanced Notice of Proposed Rule Making (ANPRM) to amend the national WQS regulations, 63 Fed. Reg. 36741-36806 (July 7, 1998). In the notice, EPA provided background information on "uses," and stated that "[d]esignated uses focus on the *attainable condition* while existing uses focus on the *past or present condition*. Section 131.10 then links these two broad use categories in a manner which intends to ensure that States and Tribes designate appropriate water uses, reflecting *both the existing and attainable* uses of each water body. For this discussion it is important to consider both the distinction between and the linkage of designated and existing uses." 63 Fed. Reg. at p. 36748 (emphasis added). It seems clear that the "condition" to which EPA refers is water quality and "existing" implies that the water quality standards are already attained – in contrast to attainable for a designated use.

EPA also provided specific information about making an existing use determination:

> In making an existing use determination, there is a link between the use and water quality. To be considered an existing use, the use must have been actually attained in the past, is now attained or water quality is sufficient to support the use. However, for some sites, water quality, alone, may be an insufficient basis for making an existing use finding if there are other factors that would prohibit the use from taking place regardless of the quality of the water at a site. (63 Fed. Reg. at p. 36753.)

This makes clear that water quality is the threshold issue in making an existing use determination, but other factors can preclude water quality, such as lack or absence of flow, that would prohibit the use from taking place regardless of the quality of the water.

EPA expanded upon this in the context of determining a recreational existing use. According to EPA, a recreational use is not an existing use when the water body is not suitable for swimming because the water quality and physical characteristics do not support that use.

> Obviously, any decision about whether or not a use is an "existing use" must be a water body–specific determination. The existing use determination is, therefore, site-specific, and decisions *should consider water quality* and other limiting factors such as the physical habitat specific to a particular water body. A few examples may help illustrate the issue. A somewhat common existing use question applies to primary contact recreation: if a few people on a few occasions 'swim' in a water body that does not have the quality or physical characteristics to support swimming, is this an existing use, even if the water body is posted 'no swimming' due to bacterial contamination and lacks the physical features to actually support swimming? *The straightforward answer to this question is that 'swimming' is not an existing use because the present (or past) condition does not support that use. This conclusion is based on the very limited actual 'use' and, more importantly, the lack of suitable water quality and physical characteristics that would support a recreational swimming use now or in the future* (as determined by the water quality requirements and recreational swimming considerations, including safety considerations, in the State or Tribal classification system for primary contact recreation).
>
> A question has been raised as to how to interpret the regulation in the context of this example. One could determine that because the water body is not suitable for swimming, and has not been since 1975, primary contact recreation is not an existing use. Alternatively, one could determine primary contact recreation to be an existing use because the water body was actually used for swimming, even though the use was occasional and water quality and physical characteristics were not acceptable to support such a use. EPA believes the first alternative is the better interpretation of Agency regulations and guidance in this example, because the use is not established and the water quality and other factors would appear to prohibit actually attaining a recreational swimming use. 63 Fed. Reg. at pp. 36752-53 (emphasis added).

The department conducted the stream use assessments in a fashion that determined whether or not Class A1 or swimming was possible for specific water bodies, regardless of the water quality condition in that water body. This was felt to be a conservative approach as it did not preclude the assignment of recreational uses to waters where the quality may not be supportive of any Class A use and potentially never will.

Issue: Stream flow fluctuation during the recreation season

Public Comments
-Flows vary throughout the recreational season. How is this accounted for?
-All assessments were completed in early May and late October. This river segment is in northern Iowa. Can anyone honestly expect data gathered at those times of the year to accurately reflect the recreational use of that river?
-When determining whether a use is attainable, the department is required to consider whether low flow conditions could inhibit recreational activities under § 455B.176A(4)(c).
- Streams are to be designated in accordance with Iowa Code § 455B.176A which requires a stream designation when the 10-year median flow is equal to or in excess of one cubic feet per second between July 1 and September 30. Many of the streams proposed to be designated in this rule package do not meet this flow requirement for a recreational use designation upon review of photographs and information provided by the DNR database. Streams not meeting the criteria of § 455B.176A should not be designated streams, but are more appropriately general use streams.
-Streams that do not flow year round or do not have enough flow during the recreation months cannot fully support the A2 recreational use. We respectfully request that the DNR not designate streams where the stream's base flow does not provide enough water for recreational use to occur, streams with shallow pools without interconnecting runs and streams where the public does not have reasonable access to recreate in the stream.

DNR Response: DNR's "Recreational Use Assessment and Attainability Analysis Protocol" describes base flow conditions as follows:

> Base Flow Conditions – Use Assessment and UAA field surveys are only "snapshots" of observations when conducted in accordance with this protocol. To acquire the best results from a single field survey, the survey for Use Assessments and UAAs should be conducted during base flow periods. Base flow is that portion of a stream's flow contributed by sources of water other than precipitation runoff. This refers to a fair weather flow sustained primarily by springs or groundwater seepage, wastewater discharges, irrigation return flows, releases from reservoirs, or some combination of these.

Even though flows vary throughout the recreational season, the department will continue to conduct recreational use assessments throughout the recreational season (March 15th to November 15th, as defined in Iowa Water Quality Standards) as long as the conditions are felt to provide for an accurate and adequate assessment of the data needed to make a use determination.

Data gathered near either end of the recreational use season can most definitely reflect accurate recreational use conditions. These periods of "leaf off" conditions are times when the field staff tend to find the most evidence of use. The areas are not overgrown with vegetation and stream flows can be low. In the winters 2005 and 2006, there was not much in the way of high flows during the winter so a lot of the evidence of use remains along the stream banks and stream beds. It should also be noted that evidence of use is not necessarily the primary driver for use determinations, nor is having to be present at times when recreation is most likely to occur (i.e., July – September). The department is working to answer the question: "is Primary Contact Recreation possible here?" and if the flow and water is present in amounts to reasonably support that activity then the question can be answered relatively easily without having to be present at times when recreation is most likely to occur.

The "fishable/swimmable" presumption applies to all perennial streams listed on the USGS 1:100,000 scale DLG data set and intermittent streams with perennial pools. Neither USGS nor any other group provides a coverage of intermittent streams with perennial pools. When an intermittent stream is observed on the map, the question of whether or not the presumption applies is an important question. The department has interpreted this to mean that it is unknown if an intermittent stream on a map falls under the rebuttable presumption until the stream in question is verified to be intermittent by a use assessment or UAA. If an intermittent stream according to USGS is visited during summer base flow conditions and is supporting aquatic life and appears to be perennial, then the department considers that stream to fall under the rebuttable presumption provisions and a UAA is needed. If the department verifies that the stream is truly intermittent then the presumption does not apply and a use assessment is written and rule-making is not required as the presumption did not apply.

Issue: There isn't enough information to make a determination

Public Comments
-A more thorough assessment of public lands is needed.
-A more thorough assessment of streams that flow through cities is needed
-We do not believe that the DNR should write an observation point report for every inch of a creek passing through publicly-owned land as has been suggested by other public comments. A representative review of observation points along a creek coupled with the opportunity for residents to provide information about the stream is acceptable and pragmatic given the limited availability of annual surveys for each of the past 40 years of stream recreational uses.

DNR Response: The department gathers data in accordance to DNR's "Recreational Use Assessment and Attainability Analysis Protocol" effective March 19, 2008 in state administrative code (IAC Ch. 61.3(8)). The data collection process requires more information and data than several other states in regards to recreational use attainability and exceeds the bar for information needed by the EPA for approval. The field

procedures are available online for review at
http://www.iowadnr.com/water/standards/recuse.html

Issue: Surveys Approach and Consideration of Surveys Received

Public Comments
-The DNR should not automatically assume that the layman public comments accurately reflect the stream's use, but should do an independent evaluation of the information.
-These designations should not be a numbers game with the designation being determined by how many people commented each way on a particular stream segment. The DNR must reconsider the proposed designation in light of conflicting comments and make its best professional judgment determination.
-When assessing the level of credibility of public comments, we ask the DNR to take a common sense approach and assess what stream use is reasonably attainable given the information available.
-The DNR needs more thorough assessments around cities.

DNR Response: The department's procedures for assessing the recreational uses of Iowa's water were primarily derived in 2005 by working with the EPA to execute a contract with an outside environmental services company. The purpose of the contract was to address issues regarding a 2004 rule making submittal to EPA that designated hundreds of miles of rivers for Class A2 protection. These procedures are heavily based off the recreational use protocols of Missouri and Kansas. This gave EPA a comfort level that the work products would be acceptable and therefore the contract was approved and field work was conducted in Iowa as a result.

These procedures were primarily for the purposes of data collection in which the data was to be used to write Use Attainability Analyses for recreational uses. These procedures had minimal instruction regarding interviews of the public and no instruction or suggestion to conduct surveys because the primary driver for considering recreational use attainability in these protocols was whether or not there was adequate water present or flow for recreational uses to occur.

As the department began to conduct field work mandated by the legislature it became apparent that there was a need for additional efforts to better involve the public into the process. In addition to the field interviews conducted from across the state as field assessments were performed, the department created postage-paid interview cards to be dropped off at streamside homes in case nobody was around for an interview. Questions about how these waters are or are not used were developed to be useful in regards to the definitions of Iowa's three Class A uses: Primary Contact, Secondary Contact, and Children's Play recreation. The survey was intended to be concise, streamlined, and provide useful information related to this effort of determining the appropriate recreational uses of Iowa's waters.

In addition to the postcards, an online stream survey was developed that contained similar questions to the postcards. Also, following the DNR's example, the Sierra Club created their own forms that were very similar to the format originated by the department.

The surveys are felt to be adequate and have proved to be very useful in providing the department another line of evidence to better ensure that an accurate recommendation is developed.

The department has thoroughly analyzed these surveys to the best of our ability given the time frames provided by the Administrative Procedures Act. Some surveys were available at the time of the original UAA draft, while others were received after the UAA recommendation was complete. The department has analyzed all the surveys that were received for streams in the Notice of Intended Action (NOIA).

There has been concern that one comment can be enough to change a designation or that environmental groups will take pictures of themselves in every stream that received a UAA to change the department's recommendations. The department's approach has been to use a reasonable, practical, common sense approach to analyzing the public comments. The surveys received came in varying forms of completion: Some surveys were incomplete, some were not specific to an exact location, some did not provide frequency of use, some were completely blank, and some provided exact detail of activities, locations, and frequencies with pictures. The department analyzed all of these comments, made adjustments to UAAs based on these comments in relationship to what the department found in the field and the UAA recommendation provided for in the NOIA.

It should be noted that the department is not required to conduct surveys as a part of the UAA and understands the UAA recommendations will be approvable on the federal level without this information. That being said, the department feels that the information obtained through the surveys proved to be very useful in providing the department another line of evidence to better ensure that an accurate recommendation is developed and in providing an avenue for the public to participate in the process.

Issue: How is existing water pollution factored into recreational assessments?

Public Comments
-Is my response saying we do not use a river for swimming because it's polluted going to be used to downgrade the stream use designation?
-If public use is required to get protection, how can anything be protected when the quality is so bad that people are afraid to use the water ways.

DNR Response: No, when assessing whether a water body is "swimmable" the department is simply looking to see if the activity is possible regardless of the current water condition.

Issue: Stream Order

Public Comments
-These are feeder streams and will add to whatever problems their receptor river has.
-All small streams drain into larger streams on to rivers.
-How can you manage the water quality of the lower reach of stream without managing the water quality of its headwaters and tributaries?

DNR Response: This issue is addressed through the department's implementation procedures that can be found in the "Supporting Document For Iowa Water Quality Management Plans, Chapter IV". Water-quality-based limits are derived to protect all downstream uses. In essence, two water quality-based limits for *E. coli* are calculated in these situations. One limit to protect upstream recreational use and one limit to protect the downstream recreational use considering *E. coli* decay over that distance. The more stringent of the two will be imposed on the facility and will ensure downstream uses are appropriately protected.

Issue: High Cost with No Impact on Water Quality

Public Comments
-The cost of the proposed rules to Iowa communities and its citizens young and old is going to have a staggering and detrimental effect and minimal impact on water quality.
-This will be a lot of work for wastewater treatment plants for little benefit. The focus should be on non-point pollution.

DNR Response*:* Locally, there could be significant improvements to the quality of the streams receiving a discharge, particularly during critical low stream flow conditions. Allowable levels of ammonia, CBOD, and bacteria will be reduced in most of the cases.

It is important to note that these rules establish appropriate water quality goals for the State of Iowa that are consistent with the minimum requirements of the federal Clean Water Act. It is also consistent with the policy of the EPC to protect and enhance the quality of all waters of the state by attempting to prevent and abate pollution of all waters to the fullest extent possible consistent with statutory and technological limitations for all point and nonpoint sources of pollution.

The water quality standards define the water quality goals for a water body by designating the use or uses to be made of the water, by setting criteria necessary to protect those uses, and by protecting water quality through antidegradation provisions. Iowa adopts water quality standards to protect public health or welfare, enhance the quality of the water, and serve the purposes of the Clean Water Act. The proposed rules do not affect the current approach for nonpoint source pollution or existing programs. Instead, it revises aspects of Iowa's water quality standards. These standards apply to the waters in Iowa and not to a specific source of pollution. Water quality standards are applicable to nonpoint sources of pollution despite the fact that there may be few direct implementation mechanisms for nonpoint sources

In general, the Department agrees that the majority of water quality issues come from the watershed and not from wastewater treatment plant outfall pipes. However, before the state can start addressing pollution from the watersheds, it is necessary to set the appropriate uses and levels of protection for Iowa streams that are consistent with the goals and intentions of the CWA. This means some cities and industries will have to meet more stringent limits for their wastewater discharge to protect the local beneficial uses of their receiving stream.

The fact that rivers and streams may already contain pollution from other sources does not obviate the responsibility or requirements for a regulated facility to treat wastewater to levels that are consistent with the Water Quality Standards.

It is the department's intent that all NPDES permits will be written based on the appropriate (field documented) level of use protection rather than an assumed level of use protection. In other words, NPDES permits will not be issued for facilities potentially affected by these rule changes until a UAA is performed and the appropriate use designation is in place through rule making. This implementation approach prevents facilities from having to meet water quality based effluent limits that are based on presumptive uses.

Nonpoint source pollution remains a significant problem. The CWA's enforceable provisions are directed at discharges from point sources - regulating the discharge of pollutants to surface waters from pipes, outlets, and other discrete conveyances. In contrast to this enforcement approach, nonpoint source water pollution - polluted runoff - is addressed primarily through non-regulatory means under the CWA. Water pollution from nonpoint sources remains a substantial contributor to the impairment of waters across the nation, especially in Iowa. Various approaches have been used to control such pollution, including assistance to states from federal planning and grant programs under the Clean Water Act (e.g., 33 U.S.C. §§ 1288, 1329). Common strategies at the state level include watershed and land use planning, development of voluntary best management practices (BMPs), technical assistance programs, cost-sharing for implementation of prevention and control measures, and some enforceable mechanisms, including regulation in the absence of any direct federal requirement or mandate.

Put simply, EPA has not established an enforceable program for regulating nonpoint sources. The decision whether to control nonpoint source pollution and in what manner is left entirely up to the State under the Clean Water Act.

The state is and has been working hard towards finding and implementing better ways to control nonpoint sources of pollution. The standards simply define and set the appropriate water quality goals and protections for Iowa's water resources independent of the current regulatory framework of water quality programs that implement the water quality standards.

Issue: Tires in the Little Sioux River
-While kayaking on the Little Sioux River in eastern Woodbury County between Anthon and Smithland on April 22 of this year, we saw large groups of tires which had been tied together for some purpose, now lodged on snags over a long stretch of river. Why have these tires not been removed? I demand that you look into this and get them out of the water.

DNR Response: Please contact DNR Field Office #3 in Spencer, IA at (712) 262-4177 to determine the appropriate course of action.

Creek Specific Comments

Mosquito Creek

One public comment was received from the county stating fishing has occurred in the Council Bluffs area. The comment also noted that several people have inquired about kayaking but this use has not been observed.

One public comment was received stating canoeing has taken place between Panama and Neola.

One public comment was received stating that the depths in several areas could support Class A1, specifically site 621-3 near the town of Persia. Also, a baseball field was about 200 feet from the stream.

One public comment received from MidAmerican Energy Company objecting to the Class A1 use near mouth of Mosquito Creek in proximity of the Walter Scott Junior Energy Center property due to access restrictions near the plant for homeland security reasons.

Analysis:

The previous assessment concluded that a Primary Contact Recreational Use (A1) designation was appropriate for Mosquito Creek in the area throughout Council Bluffs. Therefore, the comment received from the county for Mosquito Creek further supports the original recommended use designation of Class A1 in the area of Council Bluffs.

While the comment suggests canoeing, they are not consistent with the findings in the field assessment. The shallow water along the rural portion of the assessed creek length between Panama and Neola was not capable of supporting normal primary recreational uses (adjusted for elevated water stage at the time of assessment) based on the analysis in the UA/UAA. Even with elevated flows present, several very shallow measurements were recorded where floating a canoe would not be possible even at elevated flow conditions. The activity of canoeing is consistent with Class A2 and Class A1 recreational uses. In this case, due to the lack of flow expected at normal flow conditions, the Class A2 appears to be highest attainable use for this segment.

The velocity of 4 feet/2 seconds at site 621-3 suggests the creek is at an elevated flow condition and when compared with other nearby sites. An interview was also conducted at this site with a resident who walks across the bridge everyday stating he's never seen any recreational use activity in the creek, despite presence of the ball field. Field staff found no instream evidence of use.

The designation of a stream does not change the nature of access to that stream. Accessibility is not a factor by itself that can be used to determine attainability according to federal guidance. In that particular stretch of Mosquito Creek near Council Bluffs, our analysis suggest full body immersion is possible during all summer flow regimes and thereby establishes the goal use of Class A1. We are working to determine the highest

attainable recreational goals for these waters given our current designated use structure. For comparison, recreational uses have been applied on streams that flow through the Iowa Army Ammunition Plant in Burlington, IA.

The additional information from the public comments will not result in a change in the recommended designations for Mosquito Creek.

Black Hawk Creek (Black Hawk/Grundy Co.)

Two public comments were received from a local residents. One stated canoeing and kayaking take place in Black Hawk Creek in Black Hawk County. The other stated the area known as the "Greenbelt" in Black Hawk County includes trails and is suitable for canoeing

Analysis:

The previous assessment concluded that a Children's Recreational Use (A3) designation was appropriate for Black Hawk Creek in the area throughout Black Hawk County. The assessment concluded the majority of the stretch was too shallow to consistently support primary contact recreation in Black Hawk County, but recognized the creek does receive regular use or has the strong potential to receive regular use despite marginal flow conditions. Since Class A3 and Class A1 uses receive equivalent protection, the comments received for Black Hawk Creek helps further support the original recommended use designation of Class A3 in the area of Black Hawk County.

Indian Creek (Linn Co.)

Two public comments were received

One public comment was from a local resident stating they have lived near Indian Creek in Marion for over 40 years and never seen anyone using the stream between Indian Bridge Road and County Home Road for any recreational purposes.

The other public comment was from the Director of the Indian Creek Nature Center stating children's use in Indian Creek is frequent at the nature center.

Analysis:

The previous assessment concluded that a Children's Recreational Use (A3) designation was appropriate for Indian Creek throughout the assessed reach. The comment regarding no observed uses was outside the assessed reach and therefore has no bearing on this particular stream segment. The comment from the Nature Center regarding frequent children's use further supports the original recommended use designation of Class A3 throughout the assessed reach.

Mud Creek (Benton Co.)

One public comment was received from a local resident stating they swim, fish, and children play all summer long and canoeing occurs when flows allow.

Analysis:
This comment refers to Mud Creek near the City of Vinton in Benton County. Mud Creek in this rule making is near the City of Norway in Benton County. The comment was outside the assessed reach and therefore has no bearing on this particular stream segment.

Little Maquoketa River
Six public comments were received stating a good amount of canoeing and kayaking activity occurs in the river. Four of the six comments were not specific to where these activities were occurring. Two comments canoeing, floating, and kayaking activities taking place from Asbury Road to Durango.

Analysis:
The initial department recommendation concluded that a Secondary Contact Recreational Use (Class A2) designation was appropriate for the Little Maquoketa River from the confluence with the North Fork Maquoketa River to the North Line of S5, T88N, R1W, Dubuque Co. due to the lack of flow throughout the reach to completely fulfill what is considered a Class A1 primary contact recreational use and the overall lack of evidence and information to justify Children's Recreation (Class A3). (see previous recommendation map).

The depth criteria guidelines used by the department to help determine if Primary Contact Recreational use (Class A1) is attainable typically will exclude streams that are not able to support a Class A1 use due to the overall lack of flow needed to support activities that result in direct and prolonged contact with the water, involving considerable risk of ingesting appreciable quantities of water sufficient to pose a health hazard. While these guidelines are effective in most situations, there are cases where a stream demonstrates that it can support the Class A1 use despite the lack of flow that typically distinguishes a stream that can support Primary Contact Recreational uses.

The comments from the general public and local officials have indicated that multiple recreational uses occur within the Little Maquoketa River from Durango upstream to Asbury Road. The comments received describe the occurrence of activities consistent with all three of Iowa's recreational use designations.

The public comments noted recreational uses occurring at many locations throughout the Little Maquoketa River. An emphasis on canoeing was noted on several of the comments despite the marginal flows. One survey submitted by a private citizen noted specifically that the Little Maquoketa River was paddled upstream of Durango. Others noted Iowa canoe books that discuss canoeing opportunities from Asbury Road to Durango.

Primary Contact Recreational (Class A1) uses have been described in general throughout the Little Maquoketa River and specific comments relating to canoeing, kayaking, and floating activities from Durango to Asbury Road. Although the Little Maquoketa River is considered to be shallow throughout the reach by typical Class A1 criteria; it has been

demonstrated that Primary Contact Recreational uses are not only attainable, but occurring on this segment of the Little Maquoketa River.

Due to recent information the Department is modifying the original recommendations as detailed below.

- Class A1, Primary Contact Recreation from the mouth of the Little Maquoketa River (Dubuque Co.) to Asbury Road (S16, T89N, R1E, Dubuque Co.).*

- See recommendation map in appendix 2

Ballard Creek (Story Co.)

Seven public comments were received regarding Ballard Creek. Five of these comments seem to reference children's play activities upstream of the assessed reach. Two of the comments from the residents of Cambridge reference frequent summertime kids play in Ballard Creek near town.

Analysis:

The previous assessment concluded that a Secondary Contact Recreational Use (Class A2) designation was appropriate for Ballard Creek due to the lack of flow throughout the reach to completely fulfill what is considered a Class A1 primary contact recreational use and the overall lack of evidence to justify Children's Recreation (Class A3).

The commenst received from two residents of Cambridge has indicated that kids play frequently occurs in the summertime within the assessed reach of Ballard Creek. Even-though a specific location can not be pinpointed in Ballard Creek; the comment does describe activities consistent with Class A3 occurring in Ballard Creek in proximity to Cambridge. During the field assessment in 2006 there were no people observed recreating in the water. Recreational evidence was found at site 566-4 (just north of Cambridge) and consisted of graffiti under the bridge and ATV tracks near the stream.

Due to recent information and Ballard Creek's location, the Department is modifying the original recommendations as detailed below.

- Class A3, Children's Recreation from the mouth (S22, T82N, R23W, Story County) to 580th Street (West Line S16, T82N, R23W, Story County).*

- Class A2, Secondary Contact Recreation from 580th Street (West Line S16, T82N, R23W, Story County) to the confluence with Unnamed Creek (S24, T82N, R24W, Story County). *

- See recommendation map in appendix 2

Unnamed Creek (near Huxley)

Two public comments were received regarding kid's play in an Unnamed Creek near Huxley.

Analysis:
The previous assessment concluded that a Secondary Contact Recreational Use (A2) designation was appropriate for the Unnamed Creek from the mouth to the Huxley WWTP outfall. The comments regarding kids play is determined to be outside the assessed reach or in a different tributary altogether and therefore has no bearing on this particular stream segment.

Indian Creek (Audubon/Shelby/Cass Co)
One comment was received stating fishing and shallow water wading have occurred in the past.

Analysis:
The previous assessment concluded that a Secondary Contact Recreational Use (A2) designation was appropriate for Indian Creek throughout the assessed reach. The uses described are consistent with the types of activities indicative of the Class A2 use designation. Therefore, the comment received for Indian Creek further supports the original recommended use designation of Class A2 for Indian Creek.

Spring Creek (Franklin Co.)
One comment was received stating kids play occurred on Spring Creek at S22, T92N, R21W and below the Beeds Lake Dam.

Analysis:
The previous assessment concluded that a Secondary Contact Recreational Use (Class A2) designation was appropriate from the Beeds Lake Dam to the town of Hampton due to the lack of flow throughout this assessed reach to completely fulfill what is considered a Class A1 primary contact recreational use and the overall lack of evidence to justify Children's Recreation (Class A3).

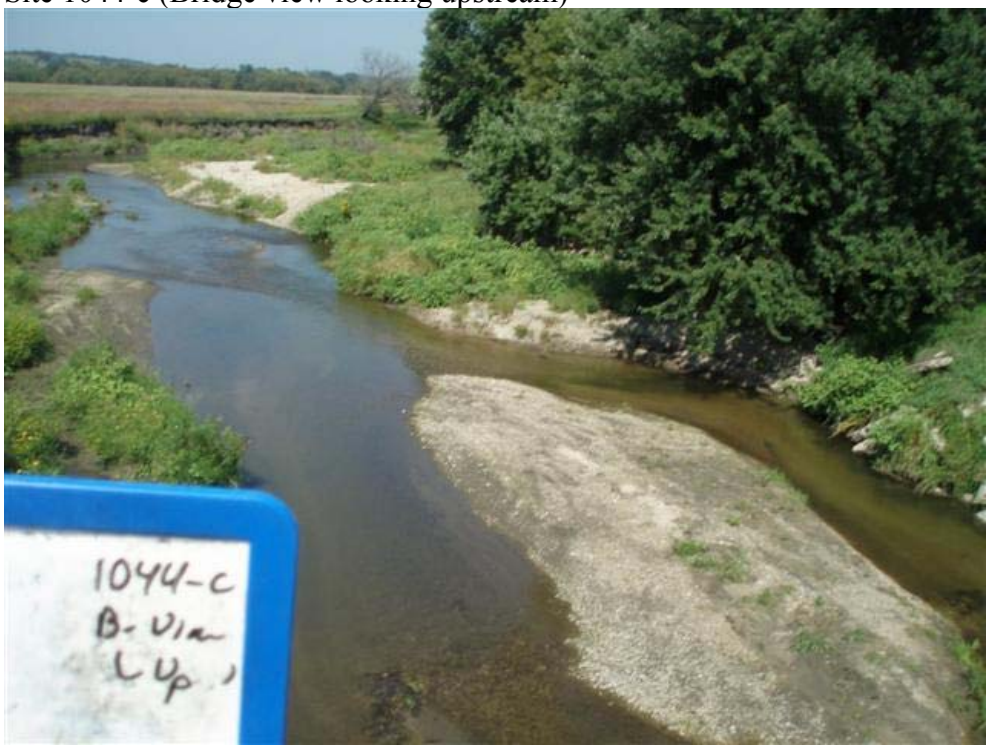
The comments received were outside the recommended Class A2 reach. Where the comments did apply is not proposed to change from the presumptive use of Class A1, B(WW-1).

Waterman Creek (O'Brien Co.)
One comment was received stating kayaking takes place from Hartley to the Little Sioux River.

Analysis:
The previous assessment concluded that a Secondary Contact Recreational Use (Class A2) designation was appropriate from the mouth to the confluence with Murray Creek (1.2 miles) due to the lack of flow throughout this assessed reach to completely fulfill what is considered a Class A1 primary contact recreational use and the overall lack of evidence to justify Children's Recreation (Class A3).

An upstream and downstream assessment was taken at the assessment site, yielding 2 sampling locations. There were no maximum or average depths found that were considered to be adequate for primary contact recreational uses as outlined in the guidelines used by the department to help determine if the stream has adequate depths to support activities that result in direct and prolonged contact with the water, involving considerable risk of ingesting appreciable quantities of water sufficient to pose a health hazard (Average depth ranged from 7-12 inches, max depth found at the site was 26 inches). A phone interview was conducted with an employee of the Iowa Department of Natural Resources Big Sioux Wildlife Unit concerning the Waterman Prairie Complex. The employee stated that he doubted that any swimming took place because there is not enough flow to swim. Also children had never been seen in the area and it is unlikely that they use the area because of the rural location. Canoeing, kayaking or tubing was mentioned to be a possible activity but again it has never been observed.

Site 1044-c (Bridge view looking upstream)



The additional information from the public comments will not result in a change in the recommended designations for Waterman Creek.

Plum Creek (Delaware Co.)

One comment was received stating canoeing takes place in Plum Creek 8-10 times per year. The comment was not specific to an exact location.

Analysis:

The previous assessment concluded that a Secondary Contact Recreational Use (Class A2) designation was appropriate for 2 segments of Plum Creek due to the lack of flow

throughout this assessed reach to completely fulfill what is considered a Class A1 primary contact recreational use and the overall lack of evidence to justify Children's Recreation (Class A3) in these segments.

Assessments conducted at 11 separate sites resulted in 20 sampling points. In general, Plum Creek did not demonstrate adequate depth for primary contact recreation to occur. During the time of the assessments on 6/15/06, the water appeared to be between 6 and 10 inches higher than normal flow conditions. Average depths of 19 inches or greater were found at some of the sample sites for Plum Creek. However, all of these measurements were influenced by elevated stream-flow conditions due to seasonal rainfall events. Recreational use assessments are ideally conducted at base flow conditions according to the Recreation UA/UAA Protocol but this is not always possible. Estimations were made in the field at the time of assessment which helps determine how elevated a stream may be. Although the flow conditions were elevated due to rains which had occurred the week prior to the assessment, the department concluded that the river would not be able to maintain depths adequate for primary contact recreation throughout the recreational season.

No people were observed recreating during the time of the assessment. Also no evidence of recreational uses was found. A phone interview was completed with an employee of the Delaware County Conservation Board. The conservation board employee stated that no known recreational uses occur within the Indian Hills Wildlife Area. An interview was conduced with a DNR official regarding the Brayton Memorial Forest. The DNR official stated that no known recreational uses occur within the forest.

654-1 Bridge view, looking upstream (note streambed visible, even at elevated flows)

The additional information from the public comments will not result in a change in the recommended designations for Plum Creek.

Orange City Slough (Sioux Co.)

One comment was received stating fishing takes place at the confluence of Orange City Slough and the Floyd River and that local teenagers are regularly in the water at this location.

Analysis:

The previous assessment concluded that a Secondary Contact Recreational Use (Class A2) designation was appropriate from the mouth to the road crossing of 450th Street (N. Line, S6, T94N, R44W, Sioux County) due to the lack of flow throughout this assessed reach to completely fulfill what is considered a Class A1 primary contact recreational use and the overall lack of evidence to justify Children's Recreation (Class A3).

Site 510-1 near mouth of Orange City Slough

Based on the data collected in the field, it is expected that the fishing activities occur on the Floyd River and that all activities described are consistent with the Class A2 Secondary Contact Recreational use for Orange City Slough. In the 8.4 miles assessed the maximum depth was found to be 20 inches, near the Orange City outfall at Site 510-3, with the majority of the reach being less than 10 inches deep.

The additional information from the public comments will not result in a change in the recommended designations for Orange City Slough.

Honey Creek (Delaware Co.)

One comment was received stating canoeing takes place in Honey Creek 8-10 times per year. The comment was not specific to an exact location.

Analysis:

The previous assessment concluded that a Secondary Contact Recreational Use (Class A2) designation was appropriate from the mouth (S19, T89N, R5W, Delaware Co.) to the 110th Street Bridge (North Line S11, T90N, R5W, Delaware Co.) due to the lack of flow throughout this assessed reach to completely fulfill what is considered a Class A1 primary contact recreational use and the overall lack of evidence to justify Children's Recreation (Class A3) in these segments.

An upstream and downstream assessment was taken at each of the six sampling sites yielding 12 sampling locations. In general, Honey Creek did not demonstrate adequate depth for primary contact recreation to occur. Only one location, Site 385-4, had an average depth recorded that meets the guidelines used by the department to help determine if enough flow is present to support primary contact recreational uses. The average depth of 22 inches at this location was noted to occur for less than 50% of the assessed reach. The width at this headwater location was 3.5 feet.

385-4 Upstream recreational assessment looking Upstream (22 inch – ave. depth at this location)


385-1 Bridgeview looking Upstream (furthest downstream site near mouth)

The additional information from the public comments will not result in a change in the recommended designation for Honey Creek.

West Branch Floyd River (Plymouth/Sioux Co.)

One comment was received stating that he went minnow seining and canoed near Maurice 4 times from B58 in the fall. He also stated that he has not observed kid's play or swimming.

One comment was received asking to reconsider existing data.

Analysis:

The previous assessment concluded that a Secondary Contact Recreational Use (Class A2) designation was appropriate from the confluence with Mink Creek (S35, T92N, R46W, Plymouth County) to the Jefferson Ave bridge crossing (East Line S24, T97N, R44W, Sioux Co.) due to the lack of flow throughout this assessed reach to completely fulfill what is considered a Class A1 primary contact recreational use and the overall lack of evidence to justify Children's Recreation (Class A3).

An upstream and downstream assessment was conducted at each sampling site, yielding 16 sampling locations. There were no depths, average or maximum, found that are considered to be adequate to support primary contact recreational uses, including water

contact recreational canoeing. The overall average depth ranged from 4 to 12 inches throughout the entire assessed reach.

68-d Bridge View Looking Upstream (average depth 10 inches, 33 feet wide, snags visible)

Although children may be recreating in or near the stream, the findings of the field assessment suggest that these activities are not at a frequency that would warrant a children's recreational use designation. The public comment stating he hasn't observed kids play further supports this conclusion.

The additional information from the public comments will not result in a change in the recommended designations for West Branch Floyd River.

Indian Creek (Sac Co.)

One comment was received from an IOWATER volunteer who used to have a site that the resident would take his students to for creek sampling. This commenter also has spent a lot time collecting macroinvertebrates in Indian Creek.

Another comment was received stating that Indian Creek was within a five mile radius of three schools and knows that science classes have taken kids to this creek.

Analysis:

The previous assessment concluded that a Secondary Contact Recreational Use (Class A2) designation was appropriate from the mouth (Sac County) to the confluence with an unnamed tributary (N ½, SW ¼, S20, T87N, R36W, Sac County) due to the lack of flow

throughout this assessed reach to completely fulfill what is considered a Class A1 primary contact recreational use and the overall lack of evidence to justify Children's Recreation (Class A3).

Footprints, fishing tackle, and a minnow trap were types of evidence found that people had been recreating in or near Indian Creek. These types of recreational uses are consistent with those protected by the Class A2 Secondary Contact Recreational Use.

In the 4 assessed sites; the maximum depth was found to be 22 inches, at Site 124-2, with the majority of the reach being less than 10 inches deep. There were not any areas found in the assessed reach of Indian Creek that had adequate maximum or average depths to support the Class A1 Primary Contact Recreation. Primary Contact recreational uses are not considered attainable for Indian Creek due to the lack of flow (40 CFR 131.10(g) (2)) throughout the reach to completely fulfill what is considered a Class A1 primary contact recreational use; however, the creek does show that it supports other types of recreation consistent with Class A2 recreation.

While it may be true that classes have visited Indian Creek for sampling in the past, Class A3 children's recreation is not recommended at this time due to the rural location, lack of recreational evidence, and unknown frequencies of use throughout the entire assessed reach; therefore, the department will continue to recommend that the Class A2 Secondary Contact recreational use apply to Indian Creek from the mouth (Sac County) to the confluence with an unnamed tributary (N ½, SW ¼, S20, T87N, R36W, Sac County). These recommendations are consistent with the creek and surrounding areas ability to support such uses.

Mud Creek (Polk Co.)

Two comments were received that as the Des Moines metropolitan area expands eastward it will become more common to see kids in the creek. One of these commenter's also observed young men seining minnows near Ivy.

Analysis:

The previous assessment concluded that a Secondary Contact Recreational Use (Class A2) designation was appropriate from its mouth (S11, T77N, R22W, Polk Co.) to the confluence with Unnamed Creek. (NE ¼, S36, T80N, R23W, Polk Co.) due to the lack of flow throughout this assessed reach to completely fulfill what is considered a Class A1 primary contact recreational use and the overall lack of evidence to justify Children's Recreation (Class A3).

At the time of assessment the area was primarily agricultural ground with limited opportunities or evidence of children's recreational use. The Class A3 use is applied where children's play is common in an area given an assessment of all relevant factors. The fact that development might occur is not felt to be adequate justification to apply a Class A3 use in that area as it does not demonstrate that children's play is currently common. The department is wary to apply the Class A3 use in these situations as there are no guarantees that these proposed developments will actually be built and occupied.

With that being said the department continually reviews the water quality standards and will watch this situation closely and determine if changes to the current recommendation are warranted in the future.

The comments received for Mud Creek did not provide any additional information about the recommended Class A2 Secondary Contact Recreational Use portion that would result in a change in the recommended designation, because minnow seining is considered a Class A2 activity. Therefore, the department's original use designation recommendation for Mud Creek will remain as Secondary Contact Recreational Use (Class A2).

Twelve Mile Creek (Union Co.)

One comment was received questioning our interpretation of the depths measured at sites 693-1, 2, & 3.

Analysis:

The previous assessment concluded that a Secondary Contact Recreational Use (Class A2) designation was appropriate from the mouth (S36, T71N, R28W, Union Co.) to the Twelve Mile Creek Lake Dam (NW ¼, S12, T72N, R30W, Union Co.) due to the lack of flow throughout this assessed reach to completely fulfill what is considered a Class A1 primary contact recreational use and the overall lack of evidence to justify Children's Recreation (Class A3).

Recreational use assessments are ideally conducted at base flow conditions according to the Recreation UA/UAA Protocol but this is not always possible. Estimations were made in the field at the time of assessment which helps determine how elevated a stream may be. Taking into account the elevated flow of the creek (5+ inches at these 3 sites assessed in May of 2006), it was concluded that no average or maximum depth are considered adequate for primary contact recreation based on the guidelines used by the department to determine the attainability of primary contact recreation. For the sites in question, 6 total average depth measurements were taken (12, 12, 22, 10, 13, and 13 inches). The average depth of 22 inches at this one location is noted to occur for less than 50% of the assessed reach. As a result, Primary Contact recreational uses are not considered attainable for Twelve Mile Creek due to the lack of flow (40 CFR 131.10(g) (2)) throughout the reach to completely fulfill what is considered a Class A1 primary contact recreational use.

Therefore, the department's original use designation recommendation for Twelvemile Creek will remain as Secondary Contact Recreational Use (Class A2).

Indian Creek (Plymouth/Sioux Co.)

One comment was received questioning our interpretation of the depths measured at sites 511-a & 511-b.

Analysis:
The previous assessment concluded that a Secondary Contact Recreational Use (Class A2) designation was appropriate from the mouth (Plymouth County) to Lasalle Road (S7, T94N, R46W, Sioux County) due to the lack of flow throughout this assessed reach to completely fulfill what is considered a Class A1 primary contact recreational use and the overall lack of evidence to justify Children's Recreation (Class A3).

Recreational use assessments are ideally conducted at base flow conditions according to the Recreation UA/UAA Protocol but this is not always possible. Estimations were made in the field at the time of assessment which helps determine how elevated a stream may be. Taking into account the elevated flow of the creek at these two sites (6-10 inches above base flow in October of 2007), it was concluded that no average or maximum depths are considered adequate for primary contact recreation based on the guidelines used by the department to determine the attainability of primary contact recreation. As a result, Primary Contact recreational uses are not considered attainable for Indian Creek due to the lack of flow (40 CFR 131.10(g) (2)) throughout the reach to completely fulfill what is considered a Class A1 primary contact recreational use.


Site 511-b - Recreation downstream looking downstream

Therefore, the department's original use designation recommendation for Indian Creek will remain as Secondary Contact Recreational Use (Class A2).

Hartgrave Creek (Franklin/Butler Co.)
One comment was received questioning our interpretation of the depths measured at sites 88-2a & 88-3. It also noted that canoeing infrequently occurs during elevated flows

according to the county conservation board interviews and that should be enough for a Class A1 designation.

Analysis:
The previous assessment concluded that a Secondary Contact Recreational Use (Class A2) designation was appropriate from the mouth (S34, T92N, R18W, Butler Co.) to the confluence of Squaw Creek (S28, T92N, R19W, Franklin Co.) due to the lack of flow throughout this assessed reach to completely fulfill what is considered a Class A1 primary contact recreational use and the overall lack of evidence to justify Children's Recreation (Class A3).

A phone interview was conducted with an employee of the Franklin County Conservation Board in regards to the Deer Meadow Wildlife Area. It was stated that no swimming takes place within this area due to the lack of access and flows are not usually deep enough for swimming. It was stated that children have never been seen recreating in the area but some canoeing and kayaking takes place but very seldom (approximately once a month). This area is however highly used for fishing, seining, or trapping of minnows and also for waterfowl hunting. For Hartgrave Creek as a whole, the employee had no knowledge of any other use taking place.

A phone interview was conducted with an employee of the Butler County Conservation Board in regards to the South Fork Park. It was stated that no swimming has ever been observed in the stream and that the pond located within the park has "no swimming" signs posted. The banks within the park are steep cut banks which makes it difficult to access the stream. They have never seen children playing in the area but kayaking approximately once a month is known to take place, especially when flows are elevated. Fishing was also said to take place. The employee had no other knowledge of any recreational activities taking place on the stream except for possible tubing from one bridge to another.

No other public comments were received for Hartgrave Creek. It should be noted that the activity of canoeing is consistent with Class A2 and Class A1 recreational uses. In this case, due to the lack of flow expected at normal flow conditions, the Class A2 appears to be highest attainable use for this segment.

An upstream and downstream assessment was taken at each of the sampling sites yielding 6 sampling locations. Of the six locations only 2 had average depths great than 19 inches, which is considered to be adequate to support primary contact type recreational uses. It was noted during the assessment that the stream flow conditions were elevated due to recent spring rain events. Recreational use assessments are ideally conducted at base flow conditions according to the Recreation UA/UAA Protocol but this is not always possible. An estimate of 9 – 15 inches was given for the approximate elevation of the stream flow. If the stream flow conditions were reduced by nine inches, there would be no average depths found to be adequate for primary contact recreational uses. A maximum depth greater than 48 inches was measured at one sampling location. Again the stream flow conditions were estimated to be elevated between 9 and 13 inches. Due

to the nature of the stream bed and in the absence of the additional flow, this area will likely fail to meet the guidelines used by the department to help determine if the stream has adequate depths to support activities that result in direct and prolonged contact with the water, involving considerable risk of ingesting appreciable quantities of water sufficient to pose a health hazard. Therefore Primary Contact recreational uses are not considered to be attainable for Hartgrave Creek due to the lack of flow (40CFR 131.10(g)(2)) throughout the reach to completely fulfill what is considered a Class A1 primary contact recreational use.

No other public comments were received for Hartgrave Creek. It should be noted that the activity of canoeing is consistent with Class A2 and Class A1 recreational uses. In this case, due to the lack of flow expected at normal flow conditions, the Class A2 appears to be highest attainable use for this segment.

Little Bear Creek (Poweshiek Co.)

One comment was received questioning our site selection for this assessment not being near cities. It questions whether it is appropriate to conduct assessments in March when there is snow cover. It questions our lack of interviews as well.

Analysis:

The previous assessment concluded that a Secondary Contact Recreational Use (Class A2) designation was appropriate from the mouth (NW ¼, SE ¼, S16, T80N, R13W, Poweshiek Co.) to the confluence with Unnamed Creek (SW ¼, S13, T80N, R16W, Poweshiek Co.) due to the lack of flow throughout this assessed reach to completely fulfill what is considered a Class A1 primary contact recreational use and the overall lack of evidence to justify Children's Recreation (Class A3).

The department conducts recreational use assessments throughout the recreational season (March 15th to November 15th, as defined in Iowa Water Quality Standards) or as long as the conditions are felt to provide for an accurate and adequate assessment of the data needed to make a use determination.

Data gathered near either end of the recreational use season can most definitely reflect accurate recreational use conditions. These periods of "leaf off" conditions are times when the field staff tend to find the most evidence of use. The areas are not overgrown with vegetation and stream flows can be low. In the winters of 2005 and 2006, there was not much in the way of high flows so a lot of the evidence of use remains along the stream banks and stream beds. Even with the limited snow cover present, evidence of use normally found was still discovered. It did not have a significant impact on our ability to acquire the necessary data to make an accurate assessment. It should also be noted that evidence of use is not necessarily the primary driver for use determinations, nor is having to be present at times when recreation is most likely to occur (i.e., July – September). The department is working to answer the question: "is Primary Contact Recreation possible here?" and if the flow and water is present in amounts to reasonably support that activity then the question can be answered relatively easily without having to be present at times when recreation is most likely to occur.

290-1 Trash present under the bridge

290-1 Upstream recreation site looking downstream

Analysis of aerial photography reveals Little Bear Creek travels through predominately rural agricultural areas. The creek also flows through the city limits of Brooklyn and

Malcom which increases the potential for frequent recreational use. However, the segment of the creek flowing through Brooklyn travels through remote agricultural areas (corn/soybean fields and pasture) and a small amount of remote industrial areas on the east side of town. A baseball field is located approximately 300 feet south of the west side of town; however pasture, corn/bean fields, and tree cover impede access at this location. The segment of the creek flowing through the City of Malcom travels through areas of agricultural corn/soybean fields and livestock pasture. Steep banks, heavy riparian cover, fences, and rural locations may affect the attainability of recreational uses from occurring or occurring at elevated frequencies at certain locations.

During the recreational assessments in March and July, no sign of stream side or instream uses were noted in the assessed reach.

Solicitation of public input on local recreational activities on Little Bear Creek noted the following responses:
1) Comments via written or Website public response opportunities – One online survey was filled out by a resident of Iowa. The city of Brooklyn was listed as the nearest town to the area of access. The survey indicated that none of the following had been observed in the creek: swimming, canoeing, kayaking, boating, tubing, children playing in the stream, minnow seining, minnow trapping, or fishing. The survey did not indicate any water recreational uses associated with the creek.

Upstream and downstream assessments were conducted at 5 bridge crossings and 1 closed bridge which yielded 12 sampling points. No areas demonstrated adequate depths for primary contact recreation based on guidelines used by the department to determine the attainability of primary contact recreation. Primary Contact recreational uses are not considered attainable for Little Bear Creek due to the lack of flow (40 CFR 131.10(g) (2)) throughout the reach to completely fulfill what is considered a Class A1 primary contact recreational use.

No evidence of recreation was found in the assessed reach. A public comment survey indicated children's recreation had not been observed on the creek. Little Bear Creek's overall remote location, lack of accessibility, riparian cover, and steep banks appeared to deter any children's recreation therefore Children's Recreation is not recommended for the assessed reach.

Therefore, the department's original use designation recommendation for Little Bear Creek will remain as Secondary Contact Recreational Use (Class A2).

Big Bear Creek (Iowa/Poweshiek Co.)
One comment was received questioning our site selection for this assessment not being near cities. It questions whether it is appropriate to conduct assessments in March when there is snow cover. It questions our lack of interviews as well and feels that Class A3 is justified near Victor and Ladora.

Analysis:
The previous assessment concluded that a Secondary Contact Recreational Use (Class A2) designation was appropriate from the mouth (NW ¼, SE ¼, S16, T80N, R13W, Poweshiek Co.) to the confluence with Unnamed Creek (SW ¼, S13, T80N, R16W, Poweshiek Co.) due to the lack of flow throughout this assessed reach to completely fulfill what is considered a Class A1 primary contact recreational use and the overall lack of evidence to justify Children's Recreation (Class A3).

The department conducts recreational use assessments throughout the recreational season (March 15th to November 15th, as defined in Iowa Water Quality Standards) or as long as the conditions are felt to provide for an accurate and adequate assessment of the data needed to make a use determination.

Data gathered near either end of the recreational use season can most definitely reflect accurate recreational use conditions. These periods of "leaf off" conditions are times when the field staff tend to find the most evidence of use. The areas are not overgrown with vegetation and stream flows can be low. In the winters 2005 and 2006, there was not much in the way of high flows so a lot of the evidence of use remains along the stream banks and stream beds. Even with the limited snow cover present, evidence of use normally found was still discovered. It did not have a significant impact on our ability to acquire the necessary data to make an accurate assessment. It should also be noted that evidence of use is not necessarily the primary driver for use determinations, nor is having to be present at times when recreation is most likely to occur (i.e., July – September). The department is working to answer the question: "is Primary Contact Recreation possible here?" and if the flow and water is present in amounts to reasonably support that activity then the question can be answered relatively easily without having to be present at times when recreation is most likely to occur.

The majority of the stream travels through rural agricultural lands which decreases the possibility of access. Portions of the stream are contained within the city limits of Victor and travel near the city of Ladora. However these areas flow through relatively remote areas that have a limited chance of being contacted at low frequencies. The creek flows in close proximity to a baseball field and track within the city of Victor however the creek is approximately 275 – 500 feet away from the grandstands for these sporting arenas. Heavy mature tree cover blocks view of the creek and impedes access at this location. Steep banks, heavy riparian cover, fences, and remote locations may affect the attainability of recreational uses from occurring or occurring at elevated frequencies at certain locations.

Solicitation of public input on local recreational activities in Big Bear Creek noted the following responses;
1) Comments via written or Website public response opportunities – no responses

Evidence of recreation in this segment of the assessed reach consisted of an ATV path next to the stream, remnants of fishing tackle, and remnants of paintball activity next to the stream. ATV and paintball activity do not indicate a water recreational use.

Big Bear Creek's overall remote location, lack of accessibility, riparian cover, lack of evidence of recreation, and steep banks appeared to deter elevated levels of children's recreation, therefore Children's Recreation is not recommended for the assessed reach. Although possible evidence of children's recreation has been found next to the creek in the City of Victor (remnants of paintball activity), it is difficult to determine if the activities are taking place at a frequency that would warrant a Class A3 Children's Recreational Use designation at this time.

With that being said the department continually reviews the water quality standards and will watch this situation closely and determine if changes to the current recommendation are warranted in the future.

The comments received for Big Bear Creek did not provide any additional information about the recommended Class A2 Secondary Contact Recreational Use portion that would result in a change in the recommended designation. Therefore, the department's original use designation recommendation for Big Bear Creek will remain as Secondary Contact Recreational Use (Class A2).

Thompson River (Union/Madison/Adair Co.)

One comment was received apparently questioning depth measurements and wanted to ensure that the water trail planned for the Thompson River would be Class A1.

Analysis:

The previous assessment concluded that a Secondary Contact Recreational Use (Class A2) designation was appropriate from the U.S. Highway 34 (S17, T72N, R28W, Union Co.) to the confluence with Marvel Creek (S8, T75N, R30W, Adair Co.) due to the lack of flow throughout this assessed reach to completely fulfill what is considered a Class A1 primary contact recreational use and the overall lack of evidence to justify Children's Recreation (Class A3).

Upstream and downstream assessments were conducted at each of the 5 bridge crossings which yield 10 sampling points. One average depth of 20 inches was found at site 391-A. Another average depth of 25 inches was found at site 391-A, however, this measurement was taken downstream of the assessed reach in a previously designated A1 portion of the stream. A beaver dam was located downstream of site 391-A temporarily elevating the stream at this location. No other areas demonstrated adequate depths for primary contact recreation based on guidelines used by the department to determine the attainability of primary contact recreation.

The water trail planned for the Thompson River travels from the NW corner of Decatur County to the Missouri State Line. This segment is downstream of the assessed reach and is designated Class A1.

The comments received for the Thompson River did not provide any additional information about the recommended Class A2 Secondary Contact Recreational Use

portion that would result in a change in the recommended designation. Therefore, the department's original use designation recommendation for the Thompson River will remain as Secondary Contact Recreational Use (Class A2).

Platte River (Taylor/Ringgold/Adams/Union Co.)

One comment was received questioning our interpretation of the overall average depths and one max depth at site 209-3. The commenter feels the Platte River can support Class A1 in Ringgold County seasonally when flows are elevated.

Analysis:

The previous assessment concluded that a Secondary Contact Recreational Use (Class A2) designation was appropriate from the mouth (S34, T92N, R18W, Butler Co.) to the confluence of Squaw Creek (S28, T92N, R19W, Franklin Co.) due to the lack of flow throughout this assessed reach to completely fulfill what is considered a Class A1 primary contact recreational use and the overall lack of evidence to justify Children's Recreation (Class A3).

Upstream and downstream assessments were conducted at ten bridge crossings which yielded twenty sampling points. Six of twenty average depth measurements (sites: 209-1 = 22 and 26 inches; 209-2 = 25 and 20 inches; 209-4 = 22 and 19 inches) and two out of twenty maximum depth measurements (Sites: 209-1 = 42 inches; 209-3 = >48 inches) demonstrated adequate depths for primary contact recreation based on guidelines used by the department to determine the attainability of primary contact recreation. However, these locations all possessed elevated flows of approximately 10-12 inches.

Measurements were influenced by elevated stream-flow conditions due to rainfall events. Recreational use assessments are ideally conducted at base flow conditions according to the Recreation UA/UAA Protocol but this is not always possible. Estimations were made in the field at the time of assessment which helps determine how elevated a stream may be. Taking into account the elevated state of the river, one maximum depth of greater than 48 inches at site 209-3 may be considered adequate for primary contact recreation.

In the data sheets for this site it was noted that this location contained several deep cuts, too deep to measure. It was also noted that the river was almost impossible to access at this location due to heavy riparian cover and very steep banks. The surrounding land uses are all rural and agricultural in nature. The one location with maximum depths considered adequate for primary contact recreation was small, isolated, and contained a shifting sand substrate. Snags, logjams, and shifting sand substrate at this location create an environment that is considered temporary in nature. This or any other area of the assessed reach is not expected to sustain conditions to support primary contact recreation.

The comments received for the Platte River did not provide any additional information about the recommended Class A2 Secondary Contact Recreational Use portion that would result in a change in the recommended designation. Therefore, the department's original use designation recommendation for the Platte River will remain as Secondary Contact Recreational Use (Class A2).

Little Walnut Creek (Appanoose Co.)

One comment was received questioning our interpretation of the overall average depths and one maximum depth at site 700-1. The commenter feels the Little Walnut Creek can support Class A1 uses in these pools.

Analysis:

The previous assessment concluded that a Secondary Contact Recreational Use (Class A2) designation was appropriate from the mouth (S1, T69N, R18W, Appanoose Co.) to the bridge crossing at 115th St. (S20, T69N, R19W, Appanoose County.) due to the lack of flow throughout this assessed reach to completely fulfill what is considered a Class A1 primary contact recreational use and the overall lack of evidence to justify Children's Recreation (Class A3).

Upstream and downstream assessments are conducted at each of the 6 bridge crossings which yielded 12 sampling points. Ten of the 12 sample sites contained average depths which ranged from 1 to 15 inches. One pooled area demonstrated adequate maximum depths for primary contact recreation at site 700-1. It was noted that this site was difficult to access due to cattle fences, paneling, fallen trees, and very steep banks. Primary Contact Recreation is not considered attainable for this pool due to the surrounding hazards.

In addition to an isolated pool at 700-1, two sample sites with isolated pools consisting of average depths of 19 inches or greater were found at sites 700-A and 700-C. The average depths of 19 inches at these two locations were noted to occur for less than 50% of the assessed reach. These depths were temporary due to the recent rainfall event and a beaver dam creating pooling regions.

The comments received for Little Walnut Creek did not provide any additional information about the recommended Class A2 Secondary Contact Recreational Use portion that would result in a change in the recommended designation. Therefore, the department's original use designation recommendation for Little Walnut Creek will remain as Secondary Contact Recreational Use (Class A2).

APPENDIX 1:
COMMENTATORS

The following is a list of the individuals and organizations that commented on the proposed rule changes during the public comment period. The commentators are grouped into similar categories and are listed in no particular order.

City/Community Officials
City of Dumont – Mayor Hearn
City of Adel – Chad Byrd – City Administrator

Organizations

Steve	Throssel	Iowa River Greenbelt Resource Trust
Rich	Patterson	Indian Creek Nature Center
John	Verdon	Friends of Pool 9, Upper Miss. River Refuge, Inc.
Gary	Siegwarth	Clayton County Pheasants Forever
Greg	Vitale	American Canoe Association
Christina	Gruenhagen	Iowa Farm Bureau
Steve	Veysey	Sierra Club
Marian	Gelb	Iowa Environmental Council
Jeff	Myrom	MidAmerican Energy
Bill	Preston	Dubuque County Conservation Board

Private Citizens:

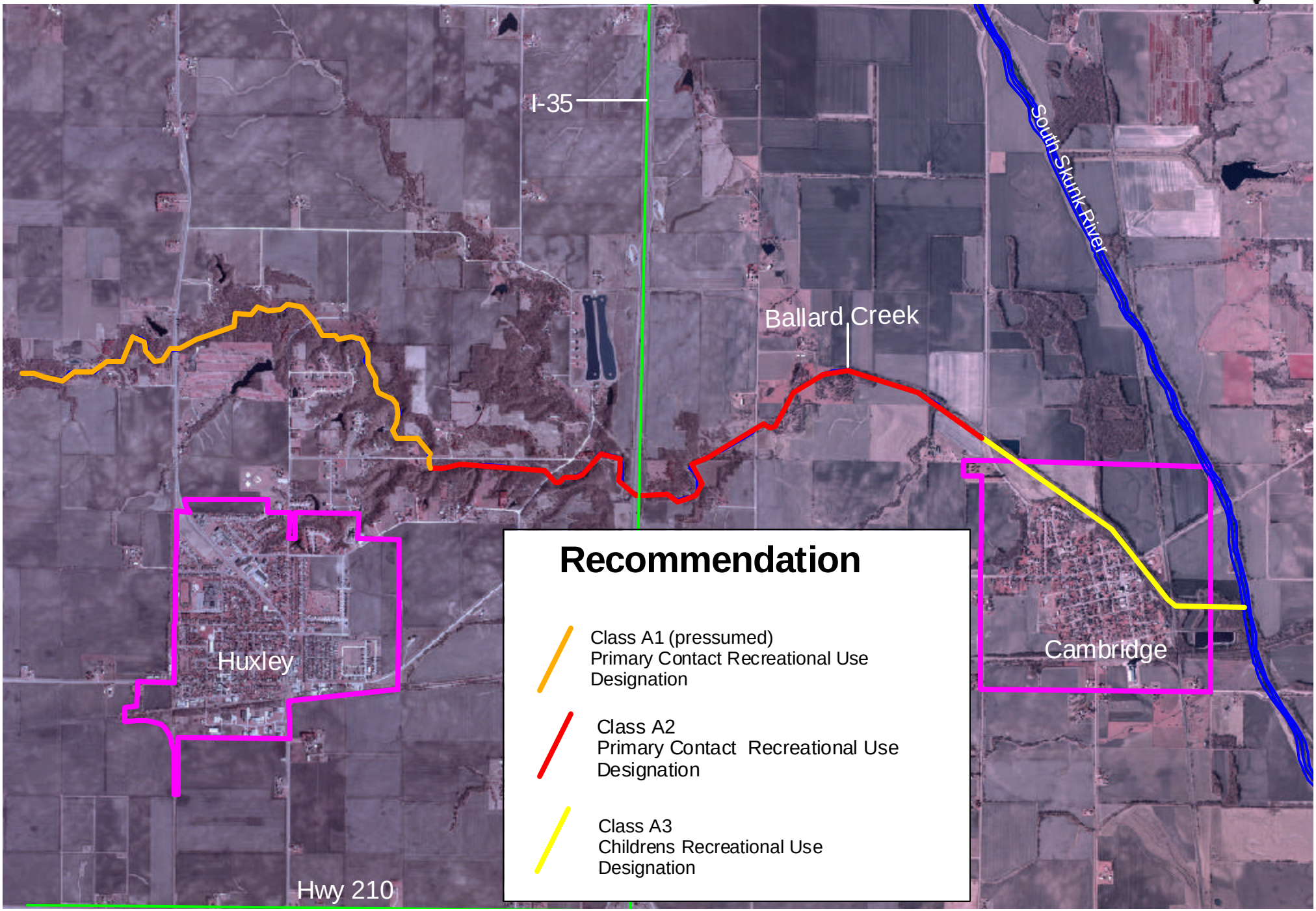
Mark	Shoemaker	Marvin	Hearn
Don	Hargrave	Cristina	East
Doug	Sanders	Heather	Jergens
Pam	Sanders	Pamela	Park
Jim	Yungclas	Tamra	McConoughey
Susan	Goodman	Thomas	Knapp
Kirk	Henderson	Melanie	Griffith
Bill	???	Donna	Frost
Darrell	Reed	Charlene	Ferguson
Bev	Hannon	Megan	Dorgan
Dave	Hannon	Laura	Frescoln
Karen	Steelman	Sue	Christiansen
Richard	Baker	Noreen	Tonkin
Emily	Karsjens	Mary	Jones
Steve	Hummel	Catherine	Sanders
Carl	Holvik	Brian	Ford
Rodney	Faris	Danette	Sumerford
KJ	Rebarcak	Amelia	Brower
Marilyn	Platner	Gary	Goldstein
David	Nolte	Kathe	Goldstein
Dustin	Sage	Jack	Carlson
Mary	McBee	Zachary	Greene

David	Bequeaith
Constance	McCrary
Hannah	Eden
Cindy	Borske
James	Cook
Brandi	McCauley
Gina	Thomas
Alta	Bardsley
Brad	Walker
Michael	Mitchell
Roger	Pelizzari
Lori	Nelson
Clark	Colby
Jody	Gibson
Jeff	Dykstra
Glenda	Dykstra
Marie	Lane
Connie	Armstrong
Catherine	Cashner
Phil	Seibert
Deborah	Eversage
Jacquelene	Lively
Mark	Straka
Margo	Vanderhill
Heather	Sheets
Sharon	Smith
Don	Alton
Philip	Klein
Myron	Mcveigh
Mary	Crooks
Alan	Henderson
Michael	Murphy
Mark	Sarcone
Susan	Reeve
Andrew	Saito
Don	Wall
Kay	Wall
Marek	Pruski
Laurence	Topliffe
Laura	Byrd
Olivia	Atcherson
Felicia	Woods
Brandy	Brinkschroeder
Thomas	Baldridge
Jeff	Meyers
Gerald	Neff
Vicki	Wright
Amanda	Monroe-Rubendall
Jane	Kauzlarich
James H	Jorgensen
Jim	Dale
Barbara	Dale
Mark	Vander Linden
Dian	Schueller
Barbara	Steinmann
Clarence	Swartz
Frank	Belcastro
Jan	Corderman
Craig	Wright
Nancy	Whitlow
Mike	Shay
Matthew	Umoren
Helen	Van Hoozer
Richard	Lem
Bonnie	Orgren
Loren	Hansen
Patrick	Bosold
Gail	Rhodes
David	Eash
Noelle	Brockhoff
John	Raines
Tim	Harris
Fran	Paterik
Carolyn	Schmidt
Emma	McCown
Kathy	Kramer
Claudette	Showalter
Kirsten	Kuhre-Holmquist
Bill	Maxwell
Michael	Andorff
Melissa	Devlin
Miles	Schumacher
Stephanie	Schumacher
Surya	Mallapragada
Darrell	Reed
Mary	Sack
Theothoros	Giannakouros
Carmen	Minor
Margie	Morgan
Linda	Bader
M	Dorsett
Dawn	Mutum-Plies
Mary	Koester
David	Koester
Diane	Krell
Roger	White
Robert	Churchill
Dennett	Hutchcroft
Diane	Gillott
Eleanor	Demuth

Rose	Riker
Scott	Hudson
Dixie	Nihsen
Julie	Quick-Alcorn
Rebecca	Grundy
Daryl	Anderson
Chad	Zenisek
Marilyn	Langhurst
Felicity	Spaulding
Charllotte	Martin
Maxine	Goodyear
Robert	Olsem
Donna	Olsem
P	Martinson
Gail	Stachovic
Robert	Klauber
Shawn	Blaesing-Thompson
Sallie	Morgan
Deidre	Rosenboom
Deke	Gliem
Mara	Winter
Daniel	Klinker
Danielle	Wirth
Steph	Colsrud
Robert	Hunt
Kris	Fobes
Wilma	Davis
Maria	Ramirez
Marie	Scherbaum
Chris	Lyness
Craig	Pearson
Melissa	Pearson
Calvan	North
Lee	Bundull
Anthony	Kiser
Gwen	Hennessey
Gay	Mikelson
Andy	Stevenson
Suzanne	Marienau
Debbie	Wheeler
Mary	Gardner
Gary	Sanborn
Martha	McCormick
Jim	McCormick
Colleen	Moomey
Elisa	Eigenberger
Sharon	Burrows
Ashley	Umoren
Fred	Balster
Ruth	Balster
Marybeth	Gardham
Ellen	Delashmutt
Becky	Wilberding
Stacy	Cox
Pamela	Mackey-Taylor
Ruben	Weaver
G	Simerson
Patricia	Fuller
Marcia	Bowman
Holly	Kukkonen
William	Niemi
Bryan	Enright
Kathy	Scholl
Ruth	Scharnau
Brad	Schabel
Claudia	Schabel
Dan	Kayser
Mark	Fox
Andy	Horton
Angela	Horton
Nancy	Miller
Susan	Martin
Patrick	Schwery
Randall	Hart
Sarah	Hart
Linda	De Somber
Jennifer	Poeschel
Diane	Rosenberg
Dave	Schoettmer
David	Brame
Jim	Dodd
Miriam	Kashia
Rosie	Partridge
D.	Sones
Dan	Knockel
Joan	Knockel
Rick	Dietz
Hannah	Childs
John	Elson
Kathy	Butler
Jen	Manders
Rich	Sims
Jennifer	Kehret
Christine	Lehman-Engledow
Conrey	Combs
Autumn	Mouw
Megan	Etheridge

APPENDIX 2:
New Recommendation Maps

Recommendation for Recreational Use Designations of Ballard Creek



Recommendation for Recreational Use Designations of the Little Maquoketa River